REISSUE PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application of:

C. J. MONAHAN, et al.

U.S. Patent No.:

5,388,260

Granted

February 7, 1995

For

TRANSPARENT LIBRARY MANAGEMENT

SUPPLEMENTAL REISSUE DECLARATION AND POWER OF ATTORNEY

BOX 7
Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Christopher J. Monahan, Mary L. Monahan, Dennis L. Willson, and Lee D. Willson, citizens of the United States of America and having the following residence and Post Office addresses:

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declare as follows:

1. The entire title and legal interest in and to U.S. Patent Application Serial No. 07/526,257 and United States Patent No. 5,388,260 (hereinafter '260 patent) granted to Monahan et al. on February 7, 1995, upon such application, was conveyed to IBM

Corporation ("IBM"). IBM is presently the owner of record of the '260 patent.

- We have reviewed and understand the contents of the specification and claims of the accompanying application for reissue.
- 3. We verily believe ourselves to be the original, first, and joint inventors of the invention described and claimed in the '260 patent and in the specification and claims of the accompanying application for which we solicit a reissue patent.
- 4. We acknowledge the duty of each individual associated with the filing and prosecution of the reissue application to disclose information known to that individual to be material to patentability as defined in 37 C.F.R. § 1.56.
- 5. We verily believe the '260 patent to be partly inoperative, or invalid, by reason of the patentees' claiming less than they had a right to claim, particularly in failing to present claims of the scope represented by reissue claims 5-9 in this application.
- 6. As described in the '260 patent, the invention is directed to an apparatus and method for providing transparent library management within a data storage system. The data

storage system consists of a host processor, an automated storage library, and a controller. The automated storage library contains storage drives for reading and/or writing data onto removable data storage media, storage cells for storing the removable data storage media, and an automated means for transferring the removable data storage media between the storage cells and the storage drives. Data is stored in files, with the files grouped into volumes, and the volumes stored on the data storage media. The host processor requests a file to be accessed by specifying the volume and the library. The controller receives the request and determines the location of the file within the library. The controller allocates a storage drive and instructs the automated means to transfer the specified volume from the storage cell to the allocated storage drive. processor then accesses the data within in the file, unaware of which storage drive the volume is mounted, such that the storage drives are transparent to the host processor. The invention allows the host processor to access a file within the automated storage library as if accessing a file on a single peripheral storage drive, with the specification of the storage drive and the subdirectory replaced by the specification of the library and the volume.

7. Patent claim 1 is a method for performing transparent library management. Claim 1 describes accessing data from a selected file within the library such that the storage drives are

transparent to the host processor using five method steps. It has come to the attention of the assignee that claim 1 contains limitations which are not essential to performing transparent library management as described in the patent specification. In particular, patent claim 1 describes a controller included within the automated storage library. Claim 1 recites in the preamble, "the automated storage library including a plurality of internal peripheral storage drives, a plurality of storage cells, automated means for transferring a data storage medium between the plurality of internal peripheral storage drives and the plurality of storage cells, and a controller coupled to each of the plurality of internal peripheral storage drives, the automated means, and a host processor." The method can operate, however, without having the controller located within the automated storage library.

8. The reissue application presents claim 5 as generally corresponding to patent claim 1. Reissue claim 5 does not include the limitation that the controller be contained within the automated storage library. Reissue claim 5 describes a data storage subsystem consisting of an automated storage library and a controller, wherein the controller is located between a host processor and the library. Reissue claim 5 recites "a data storage subsystem having an automated storage library and a controller", wherein the library includes "a plurality of storage drives", "a plurality of storage cells", and "an automated

means." Reissue claim 5 further recites "said controller coupled to each of said storage drives, said automated means, and a host processor." In addition, reissue claim 5 rephrases the preamble to enhance the clarity of the claim. Reissue claim 6 depends from reissue claim 5 and generally corresponds to patent claim 2.

- 9. Claim 3 of the '260 patent is directed generally to an apparatus for providing transparent library management. Patent claim 3 describes an automated storage library for accessing data in a file such that peripheral storage drives within the library used for such data access are transparent to a host processor requesting such data access. This claim also contains limitations which are not essential to providing transparent library management as described in the patent specification. with patent claim 1, patent claim 3 describes a controller included within the automated storage library. Claim 3 recites the following elements: "a plurality of internal peripheral storage drives", "a plurality of storage cells", "an automated means", and "a controller." The controller is "coupled to each of the plurality of internal peripheral storage drives, the automated means, and the host processor." The invention can operate, however, without having the controller located within the automated storage library.
- 10. Reissue claim 7 generally corresponds to patent claim 3 without the aforementioned limitation that the controller be

located within the automated storage library. Reissue claim 7 describes a data storage subsystem consisting of an automated storage library and a controller, wherein the controller is located between a host processor and the library. Reissue claim 7 recites "a data storage subsystem" comprising "an automated storage library" and "a controller", wherein the library includes "a plurality of peripheral storage drives", "a plurality of storage cells", and "an automated means." Reissue claim 7 further recites that the controller is "coupled to each of said storage drives, said automated means, and said host processor." In addition, reissue claim 8 depends from reissue claim 7 and generally corresponds to patent claim 4.

- 11. In addition to the insufficiency of patent claims 1 and 3 as previously described, the '260 patent fails to claim a computer program product as entitled by the scope of the patent application. A recently decided case involving the Assignee has led to the allowance of a new class of claims, typically referred to as computer program product claims. In re Beauregard, App. No. 95-1054 (Fed. Cir. 1995). In In re Beauregard, the Commissioner of Patents and Trademarks has now concluded that computer programs embodied in a tangible medium are patentable subject matter under 35 U.S.C. §101 and must be examined under 35 U.S.C. §\$102, 103.
 - 12. Reissue claim 9 describes a computer program product,

or article of manufacture, for use in a data storage subsystem providing transparent library management. Reissue claim 9 recites "an article of manufacture for use in a data storage subsystem having an automated storage library and a controller, said data storage subsystem for accessing data in a file on one of a plurality of volumes stored within said library such that peripheral storage drives within said library are transparent to a host processor." Reissue claim 9 further recites "said article of manufacture comprising a computer usable storage medium having a computer readable program code embodied in said medium."

- 13. The presence of unnecessary limitations in claims 1 and 3, and the failure to include a computer program product claim, were first called to our attention at the time that this reissue application was filed. Prior to that time, the inventors were unaware of the significance of these limitations or the potential limiting affect thereof. The inventors believe that these errors arose from the failure of the attorney originally prosecuting this patent to recognize and appreciate the full scope of the invention. Upon information and belief, every error in the patent which has been corrected in the present reissue application, and which is not covered by the prior oath(s) and/or declaration(s) submitted in this application, arose without any deceptive intention on the part of the Applicant.
 - 14. This declaration is accompanied by an order of a title

report as required by 37 C.F.R. §1.178.

- 15. This declaration is also accompanied by assignee's assent to the filing of the attached reissue application and by the assignee's offer to surrender the original Letters Patent as required by 37 C.F.R. § 1.178.
- 16. We appoint the following as our attorneys or agents with full power of substitution to prosecute the attached reissue application and to transact all business in the Patent and Trademark Office connected therewith.

Philip R. Wadsworth (#29,219) Christopher A. Hughes (#26,914) John E. Hoel (#26,279) Robert M. Sullivan (#39,391) Edward A. Pennington (#32,588) Joseph C. Redmond, Jr. (#18,753)

17. Correspondence in connection with the attached reissue application should be addressed to:

Robert M. Sullivan
IBM Corporation
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18. The undersigned petitioners declare further that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements or the like so made are punishable by fine or imprisonment, or both, under Section 1001

of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated: 4/23/1999

Dated: 4/23/1999

Dated: 4/28/1999

Dated: 4/23/1955

By: Christopher J. Monahan

By: May L Monahan

By: // Willson

Lee D. Willson